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| 10/596,281 | 06/08/2006 | Richard Brian Perry | 70335 | 4892 |

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PATENT AND TRADEMARK DEPARTMENT
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EXAMINER

SULLIVAN, DANIELLE D

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

01/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,281

Applicant(s)

PERRY ET AL.

Examiner

DANIELLE SULLIVAN

Art Unit

1616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1.4.5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1.4.5 and 8-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claims 1, 4, 5, 8-22 are pending for examination on the merits. Claims 2, 3, 6 and 7 have been cancelled.

Withdrawn rejections

Applicant's amendments and arguments filed 10/08/2008 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below are herein withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4, 5 and 8-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/578211. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims disclose an amine adjuvant is generic to all that are recited in the copending claims, that is, claims 1, 4, 5 and 8-22 of the copending application fall entirely within the scope of the instant claim 1, 4, 5 and 8-22.

Case law firmly establishes that a later genus claim limitation is anticipated by, and therefore not patentably distinct from, an earlier species claim. *In re Berg*, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 1053, 29 USPQ2d 2010, 2016 (Fed. Cir. 1993); *In re Gosteli*, 872 F.2d 1008, 1010, 10 USPQ2d 1614, 1616 (Fed. Cir. 1989); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782, 227

USPQ 773, 779 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d at 944, 214 USPQ at 767 (C.C.P.A. 1982).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 4, 5 and 8-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/596268. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims disclose an amine adjuvant is generic to all that are recited in the copending claims, that is, claims 1, 4, 5 and 8-22 of the copending application fall entirely within the scope of the instant claim 1, 4, 5 and 8-22.

Case law firmly establishes that a later genus claim limitation is anticipated by, and therefore not patentably distinct from, an earlier species claim. *In re Berg*, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 1053, 29 USPQ2d 2010, 2016 (Fed. Cir. 1993); *In re Gosteli*, 872 F.2d 1008, 1010, 10 USPQ2d 1614, 1616 (Fed. Cir. 1989); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782, 227 USPQ 773, 779 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d at 944, 214 USPQ at 767 (C.C.P.A. 1982).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 10/08/2008 have been fully considered but they are not persuasive. Applicants argue that there is sufficient difference between the respective applications to merit withdrawal of the rejections. However, Applicant's have not addressed these differences. Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them. Therefore, the rejections under obviousness-type double patenting are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1,4, 5, 8-13, 21 and 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914).

Applicant's Invention

Applicant claims an agrochemical composition comprising paraquat or diquat or mixtures thereof and an amine adjuvant which has no surfactant properties, wherein the

ratio by weight of the amine adjuvant to agrochemical active ingredient is from 1:10 to 1:2. Claim 4 specifies the concentration of paraquat or diquat is greater than 100 g/L. Claim 5 limits the amine adjuvant is triethylenediamine or tetramethylethylenediamine. Claim 8 further comprises 10-400 g/L of an electrolyte purgative. Claim 9 specifies the purgative is magnesium sulphate. Claim 10 further comprises an alginate. Claim 11 further specifies the magnesium sulphate is from 10-100 g/L. Claims 12 and 13 further comprise a second adjuvant, preferably a surfactant. Claim 21 and 22 specifies the ratio of amine adjuvant and second adjuvant is preferably from 1:10 to 10:1 or 1:5 to 10:1, respectively.

Determination of the scope and the content of the prior art
(MPEP 2141.01)

Ashford et al. disclose an agrochemical composition comprising a salt of paraquat, a salt of diquat or a mixture thereof, the composition further comprising purgative wherein a pH triggered gel effect takes place at the acid pH of human gastric juice, wherein the gelling agent is an alginate and wherein the composition comprises (a) one or more cationic or nonionic surfactants and (b) one or more anionic surfactants (page 7, lines 15-20). Non-ionic surfactants include alkyl amine ethoxylates, such as SYNPROLAM 35 x 15 (page 8, lines 13 and 14). The ratio of group (a) surfactants to group (b) surfactants is preferably from 1:2 to 10:1 (page 7, lines 13 and 14). Examples 1-3 disclose formulations comprising paraquat dichloride (200 g/L), SYNPROLAM 35 x 15 (31 g/L) and magnesium sulphate (74 g/L). The alginates are taught as natural block copolymers extracted from seaweed (page 4, lines 6-10).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Ashford et al. do not teach the amine adjuvant which has no surfactant properties. It is for this reason that Scher et al. is joined.

Scher et al. teach that triethylenediamine is a catalyst which accelerates polymerization of coating membranes for agricultural use (column 1, lines 22-29; column 5, lines 12-21 and 37-41). The catalyst accelerates polymerization and can be used to hold herbicides such as glyphosate (column 6, lines 64 and 65).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ashford et al. and Scher et al. to further include triethylenediamine. One would have been motivated to utilize triethylenediamine because Scher et al. teach that it accelerates polymerization. Since Ashford et al. teach that alginates are natural copolymers used in the formulation of the gelling agent one would have been motivated to utilize triethylenediamine as a catalyst because Scher et al. teach that it is known to be used in the formulation of herbicides.

Claim 14-20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914) in further view of Humble et al. (US 6,734,141).

Applicant's Invention

Applicant claims the composition as addressed in above 103(a) rejection. Claim 14 specifies that the second adjuvant may be selected from alkyl polyglycoside or betaines. Claim 16 specifies that the second adjuvant may be selected from alcohol ethoxylates or amine oxides. Claim 15 specifies that the second adjuvant is present at a lower concentration than the amine adjuvant. Claims 17-20 specifies the ratio of amine adjuvant and second adjuvant is 50:1 to 1:50, 10:1 to 1:10, 1:1 to 1:25 or 1:4 to 1:15, respectively.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

The teachings of Ashford et al. and Scher et al. are addressed in above 103(a) rejection.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Ashford et al. and Scher et al. do not teach the second adjuvant is preferably selected from alkyl polyglycoside and betaines or selected from alcohol ethoxylates and amine oxides. Ashford et al. and Scher et al. do not teach that the second adjuvant is present at a lower concentration than the amine adjuvant or that the weight ratio is such that the amine adjuvant to the second adjuvant ranges from about 50:1 to 1:50,

preferably 10:1 to 1:10 or 1:1 down to 1:25, preferably 1:4 to 1:15. It is for this reason that Humble et al. is joined.

Humble et al. teach that non-spreading silicone surfactants advantageously used with herbicides, such as diquat and paraquat (column 6, lines 25-31; column 8, lines 8-12). The use of co-surfactants and co-adjuvants (second adjuvants) is taught as common practice in formulations and adjuvant blends, where a variety of properties may be desired from the adjuvant and co-surfactants include quaternary ammonium surfactants, amine oxides, betaines, alcohol alkoxylates, alkoxylated amides and alkyl polyglycosides (column 8, lines 35-67). The adjuvant formulations can contain from 0 to about 99% by weight of co-surfactants (column 9, lines 40-45). Therefore, the amount of co-surfactants can vary across a wide range.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ashford et al., Scher et al. and Humble et al. and further include co-surfactants in a lower concentration than the amine adjuvant. One would have been motivated to manipulate ranges during routine experimentation to discover the optimum or workable range since Humble et al. teach co-surfactants can vary across a wide range. Therefore, one of ordinary skill would be able to adjust the amount of the co-surfactant in order to obtain a desired formulation.

Response to Arguments

Applicant's arguments filed 10/08/2008 have been fully considered but they are not persuasive. Applicants argue that Scher et al. discloses triethylene diamine as a catalyst and provides not motivation to include the amine in a paraquat/diquat agrochemical composition. The Examiner disagrees with this viewpoint.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Therefore, it is the combination of Ashford et al. and Scher et al. that Applicant is seeking to obviate. Ashford et al. teach formulation comprising paraquat/diquat and alginate as a gelling agent. The alginates are taught as natural block copolymers extracted from seaweed (page 4, lines 6-10). On the other hand, Scher et al. is directed to the formulation of herbicidal formulations where triethylene diamine is taught as a catalyst. This is not a teaching away from it being used as an amine adjuvant. In fact, the nature of the invention provides motivation to include it because it accelerates polymerization which aids in the formulation of a stable formulation. Applicant's amendment has necessitated the new rejections as set forth.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 6-13, 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for triethylenediamine (TEDA), as an amine adjuvant which has no surfactant properties, does not reasonably provide enablement for other amine adjuvants which have no surfactant properties. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Attention is directed to In re Wands, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing Ex parte Forman, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

- 1) the nature of the invention
- 2) the state of the prior art
- 3) the relative skill of those in the art
- 4) the predictability of the art
- 5) the breadth of the claims
- 6) the amount of direction or guidance provided
- 7) the presence or absence of working examples
- 8) the quantity of experimentation necessary

The nature of the invention.

The nature of the invention is an agrochemical composition comprising an active ingredient which is paraquat or diquat and an amine adjuvant which has no surfactant properties.

The state of the prior art & predictability of the art

The state of the art is that in order to make a composition the components must be known. To predict if a component has surfactant properties in highly unpredictable since this requires known structure and/or guidance as to how the surfactant is made as well as knowledge of potential interactions.

The breadth of the claims

The claims are extremely broad because they read on compositions known and possibly unknown structures.

The amount of guidance or direction provided

The specification states that TEDA has no surfactant properties (page 1, lines 11-24). However, there is no guidance to lead one of ordinary skill to be able to find other amine adjuvants which do not have surfactant properties.

The presence or absence of working examples

The specification states that TEDA and TMEDA are amine adjuvants, however, only TEDA is taught to not have surfactant properties.

The quantity of experimentation necessary & relative skill in the art

To determine how to make an amine adjuvant which has no surfactant properties would require undue experimentation for one skilled in the art.

Therefore, it would require undue experimentation to determine how to make amine adjuvants which have no surfactant properties.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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